McLennan, John Cunningham Nov. 1915- June 1916

DEPARTMENT OF PHYSICS

Toronto, Dec 9, 1915.

President Falconer,
University of Toronto.

Dear President Falconer,

I received the enclosed letter of resignation from Mr. Mezen a few days ago, and Professor Brodie informs me that he has also received one. I had a talk with Mr. Mezen and it seems that he is proposing to start a glass blowing establishment in the city. I understand that the demand for glass work is so great since the supplies were cut off from Germany that he is likely to be able to make much more money than he is making now in the University.

In a conversation I had with him I pointed out how his proposal to leave now would embarrass me in the work of my Department, and I suggested to him that I thought the proper thing to do would be to continue on in his post until the first or the middle of April, or until we can get a glass blower in his place if one can be obtained.

In the ordinary work of the laboratory glass breakages are continually occurring, and in practically all of the twelve or thirteen researches which are being carried on by the different men in my Department a very large amount of glass blowing is required. If Mr. Mezen leaves us as he proposes to do in this letter it will mean that all this research work will stop. It will be quite impossible to go on with it. You will readily see what a blow this is going to be to my Department. It will simply mean that all those who are proceeding to the M.A. or Ph. D. degrees will be landed high and dry. I do hope that you can do something to induce Mr. Mezen to reconsider his letter of resignation.

If Mr. Mezen had informed us last summer that he contemplated any such action as this we could have had a glass blower here in the autumn. We shall probably have to get the glass blower either from England, from Holland, or from the United States, and as it is well to see him first before engaging him, it does not seem feasible or at all likely that we can get one easily before next summer.

I shall be glad if you can assist Professor Brodie and myself in this matter, to have Mr. Mezen stay with us till the spring.

I have the honour to be,
Yours faithfully,

J C McLennan

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February 23rd, 1916

Professor J. C. McLennan,
Department of Physics,
University of Toronto.

My dear Professor McLennan:

I have a letter this morning from Professor T. L. Walker in which he states that at the meeting of the Board of Graduate Studies held on Monday you told the Board that there had been complaints of neglect of Dr. Walker in his departmental work. Naturally Dr. Walker is much incensed at this statement and has reported it to me and asked me to make inquiry as to what evidence there is for such a remark. It is of course a serious charge and I feel that in justice to Professor Walker you should give me the grounds on which you base your charge. I may say that no reports of his neglect have ever been made to me.

Yours sincerely,

President.

DEPARTMENT OF PHYSICS

Toronto, Feb 24, 1916.

Personal.

President Falconer,
University of Toronto.

My dear President Falconer,

I am sorry to hear that Professor T.L. Walker is annoyed about a remark which I made at the Board of Graduate Studies on Monday last. He brought it on himself. however, and perhaps I may take the liberty of suggesting that since he has chosen to bring the matter to your attention. he might also have related to you all the circumstances connected with the incident.

They are as follows:-

In the course of a debate the suggestion was made that the Board of Graduate Studies might undertake to receive applications from candidates for admission at any time during the year.- during the sammer, for example. Professor Walker immediately proffered the remark that such a policy would be inoperable on account of members of the staff being away from the University in the summer, and he cited the Department of Physics as illustrating the bearing of his remarks. Now I venture to think there was no need to particularize in this matter, and as it was the second time in debate recently when a reference of this character was made to my going to Europe in the summer, I thought as I had not said anything on the previous occasion that it was time to indicate that such references had better stop. I therefore said, that on going to Europe in the summer I always made such arrangements as were satisfactory to you for having all questions which might come up in connection with my Department settled promptly and fully by a member of my staff on the spot acting for me. I said further that " I had never heard of any complaint in regard to my department in this connection, and that the only complaint I had ever heard of had been in connection with the department of which my colleague (Professor Walker) was the distinguished head."

That was the incident, and Professor Walker said nothing further. Had he asked what was in my mind I should have told him that it was a case which he on several occasions some time ago brought forward of a student writing in the summer for information connected with the Department of Mineralogy and not getting an answer to his questions. Professor Walker, in referring to this case took the ground I understood, that the old Board of Postgraduate Studies did not look after its duties in the summer as it should, and I am under the impression that when this matter was disposed of it was not clear whether someone in the Registrar's Office had failed to give the information asked for through inadvertence, or through the impossibility of getting the information asked for in the summer from the Department of Mineralogy.

Professor Macallum will, no doubt, be able to recall the details of the case. I am sorry that you have been troubled with this matter for I should have thought that the rules of debate which obtain in the Board of Postgraduate Studies would have been found sufficiently broad to have allowed the matter to be disposed of there.

I have the honour to be,

Yours faithfully,

J C McLennan

[1915-16]

UNIVERSITY OF TORONTO

Department of Physics.

The Department of Physics of the University of Toronto in addition to providing instruction in all subjects embraced in the curriculum of undergraduate studies offers courses of lectures of an advanced or postgraduate nature as follows:

1. Properties of Matter. Fifty lectures.
2. Advanced Heat and Thermodynamics. Fifty lectures.
3. Geometrical Optics. Thirty-five lectures.
4. Mathematical Theory of Electricity and Magnetism. Fifty lectures.
5. Theory of Optics. Fifty lectures.
6. Elasticity, Elastic Solid Theory of Light, Polarisation. Fifty lectures.
7. Acoustics, Fourier's Series and its applications to Physics. Twenty-five lectures.
8. Hydromechnaics. Twenty-five lectures.
9. The Physical Properties of Colloidal Solutions. Twenty-five lectures.
10. The Electromagnetic Theory of Light and the Electron Theory of Matter. Fifty lectures.
11. Conduction of Electricity through Gases and Radioactivity. Fifty lectures.
12. Atomic Structure and the Origin and Characteristics of Spectra. Twenty-five lectures.
13. Theories of Radiation, including Photoelectricity and other illustrations of the "Quantum"Theory . Twenty-five lectures.
14. The Principle of Relativity with applications to Radiation and the electron Theory. Twenty-five lectures.

The Physical Laboratory is provided with an excellent mechanical workshop and a department for glass blowing. It contains a machine for the manufacture of liquid air and all types of apparatus for measurements in mechanics, hydrostatics, heat, sound, light, electricity and magnetism, radioactivity and radiations generally. Its optical equipment includes spectrgraphs and spectrometers with gladd, quartz, and fluorite dispersing systems, interferometers of the Michelson, Lummer, (both quartz and glass) Fabry and Perot, Jamin and echelon types, a fifteen foot plane grating, a twenty-one foot concave grating and a vacuum grating spectroscope for measurements on ultraviolet radiation, a Hilger infrared spectrometer and a number of X ray spectrometers. The electric department contains standard cells, standard resistances, Wheatstone bridges, potentiometers, quadrant electrometers, induction coils of various sizes, and a number of transformers. In sound the collection is unique and consists of standard forks, organ pipes, wave sirens and most of the types of apparatus constructed by the late Dr. Rudolp Koenig of Paris.

The laboratory affords to students proceeding to the M.A., and Ph.D., degrees facilities for all types of investigations involving physical measurements. In addition a limited amount of accommodation is available for researches of an industrial or technical character.

(Signed) J. C. McLennan

BOARD OF EDUCATION.

SCHEME FOR THE ORGANISATION AND DEVELOPMENT OF SCIENTIFIC AND INDUSTRIAL RESEARCH.

Presented to both Houses of Parliament by Command of His Majesty.

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SCHEME FOR THE ORGANISATION AND DEVELOPMENT OF SCIENTIFIC AND INDUSTRIAL RESEARCH.

1. There is a strong consensus of opinion among persons engaged both in science and in industry that a special need exists at the present time for new machinery and for additional State assistance in order to promote and organise scientific research with a view especially to its application to trade and industry. It is well-known that many of our industries have since the outbreak of war suffered through our inability to produce at home certain articles and materials required in trade processes, the manufacture of which has become localised abroad, and particularly in Germany, because science has there been more thoroughly and effectively applied to the solution of scientific problems bearing on trade and industry and to the elaboration of economical and improved processes of manufacture. It is impossible to contemplate without considerable apprehension the situation which will arise at the end of the war unless our scientific resources have previously been enlarged and organised to meet it. It appears incontrovertible that if we are to advance or even maintain our industrial position we must as a nation aim at such a development of scientific and industrial research as will place us in a position to expand and strengthen our industries and to compete successfully with the most highly organised of our rivals. The difficulties of advancing on these lines during the war are obvious and are not under-estimated, but we cannot hope to improvise an effective system at the moment when hostilities cease, and unless during the present period we are able to make a substantial advance we shall certainly be unable to do what is necessary in the equally difficult period of reconstruction which will follow the war.

2. The present scheme is designed to establish a permanent organisation for the promotion of industrial and scientific research.

It is in no way intended that it should replace or interfere with the arrangements which have been or may be made by the War Office or Admiralty or Ministry of Munitions to obtain scientific advice and investigation in connection with the provision of munitions of war. It is, of course, obvious that at the present moment it is essential that the War Office, the Admiralty, and the Ministry of Munitions should continue to make their own direct arrangements with scientific men and institutions with the least possible delay.

3. It is clearly desirable that the scheme should operate over the Kingdom as a whole with as little regard as possible to the Tweed and the Irish Channel. The research done should be for the Kingdom as a whole, and there should be complete liberty to utilise the most effective institutions and investigators available, irrespective of their location in England, Wales, Scotland or Ireland. There must therefore be a single fund for the assistance of research, under a single responsible Body.

4. The scheme accordingly provides for the establishment of :—

(*a*) A Committee of the Privy Council responsible for the expenditure of any new moneys provided by Parliament for scientific and industrial research ;

(*b*) A small Advisory Council responsible to the Committee of Council and composed mainly of eminent scientific men and men actually engaged in industries dependent upon scientific research.

5. The Committee of Council will consist of the Lord President, the Chancellor of the Exchequer, the Secretary for Scotland, the President of the Board of Trade, the President of the Board of Education (who will be Vice-President of the Committee), the Chief Secretary for Ireland, together with such other Ministers and individual Members of the Council as it may be thought desirable to add.

The first non-official Members of the Committee will be :—

The Right Hon. Viscount Haldane of Cloan, O.M., K.T., F.R.S.,
The Right Hon. Arthur H. D. Acland, and
The Right Hon. Joseph A. Pease, M.P.

The President of the Board of Education will answer in the House of Commons for the sub-head on the Vote, which will be accounted for by the Treasury under Class IV., Vote 7, " Scientific Investigations, &c."

It is obvious that the organisation and development of research is a matter which greatly affects the public educational systems of the Kingdom. A great part of all research will necessarily be done in Universities and Colleges which are already aided by the State, and the supply and training of a sufficient number of young persons competent to undertake research can only be secured through the public system of education.

6. The primary functions of the Advisory Council will be to advise the Committee of Council on—

(i) proposals for instituting specific researches;
(ii) proposals for establishing or developing special institutions or departments of existing institutions for the scientific study of problems affecting particular industries and trades;
(iii) the establishment and award of Research Studentships and Fellowships.

The Advisory Council will also be available, if requested, to advise the several Education Departments as to the steps which should be taken for increasing the supply of workers competent to undertake scientific research.

Arrangements will be made by which the Council will keep in close touch with all Government Departments concerned with or interested in scientific research and by which the Council will have regard to the research work which is being done or may be done by the National Physical Laboratory.

7. It is essential that the Advisory Council should act in intimate co-operation with the Royal Society and the existing scientific or professional associations, societies and institutes, as well as with the Universities, Technical Institutions and other Institutions in which research is or can be efficiently conducted.

It is proposed to ask the Royal Society and the principal scientific and professional associations, societies and institutes to undertake the function of initiating proposals for the consideration of the Advisory Council, and a regular procedure for inviting and collecting proposals will be established. The Advisory Council will also be at liberty to receive proposals from individuals and themselves to initiate proposals.

All possible means will be used to enlist the interest and secure the co-operation of persons directly engaged in trade and industry.

8. It is contemplated that the Advisory Council will work largely through Sub-Committees reinforced by suitable experts in the particular branch of science or industry concerned. On these Sub-Committees it would be desirable as far as possible to enlist the services of persons actually engaged in scientific trades and manufactures dependent on science.

9. As regards the use or profits of discoveries, the general principle on which grants will be made by the Committee of Council is that discoveries made by institutions, associations, bodies, or individuals in the course of researches aided by public money shall be made available under proper conditions for the public advantage.

10. It is important in order to secure effective working that the Advisory Council should be a small Body, but it is recognised that even if full use is made by the Council of its power to work through reinforced Sub-Committees, its membership may be found inadequate to do justice to all the branches of industry in which proposals for research may be made or to the requests of other Government Departments for assistance. It is therefore probable that it will be found necessary to strengthen the Council by appointing additional Members.

The first Members of the Council will be:—

The Right Hon. Lord Rayleigh, O.M., F.R.S., LL.D.
Mr. G. T. Beilby, F.R.S., LL.D.
Mr. W. Duddell, F.R.S.
Prof. B. Hopkinson, F.R.S.
Prof. J. A. M'Clelland, F.R.S.
Prof. R. Meldola, F.R.S.
Mr. R. Threlfall, F.R.S.
With Sir William S. M'Cormick, LL.D., as *administrative Chairman*.

11. The Advisory Council will proceed to frame a scheme or programme for their own guidance in recommending proposals for research and for the guidance of the Committee of Council in allocating such State funds as may be available. This scheme will naturally be designed to operate over some years in advance, and in framing it the Council must necessarily have due regard to the relative urgency of the

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problems requiring solution, the supply of trained researchers available for particular pieces of research, and the material facilities in the form of laboratories and equipment which are available or can be provided for specific researches. Such a scheme will naturally be elastic and will require modification from year to year ; but it is obviously undesirable that the Council should live " from hand to mouth " or work on the principle of " first come first served," and the recommendations (which for the purpose of estimating they will have to make annually to the Committee of Council) should represent progressive instalments of a considered programme and policy. A large part of their work will be that of examining, selecting, combining, and co-ordinating rather than that of originating. One of their chief functions will be the prevention of overlapping between institutions or individuals engaged in research. They will, on the other hand, be at liberty to initiate proposals and to institute inquiries preliminary to preparing or eliciting proposals for useful research, and in this way they may help to concentrate on problems requiring solution the interest of all persons concerned in the development of all branches of scientific industry.

12. An Annual Report, embodying the Report of the Advisory Council, will be made to His Majesty by the Committee of Council and laid before Parliament.

13. Office accommodation and staff will be provided for the Committee and Council by the Board of Education.

ARTHUR HENDERSON.

23*rd July* 1915.

Current quotations, f.o.b. Pittsburgh, unless otherwise noted, and in general for delivery at mill convenience, with premiums sometimes paid for prompt shipment, and with forward contracts difficult to place:

Rails, standard sections, 1.25c. for Bessemer, 1.34c. for open-hearth, f.o.b. mill, except Colorado.

Plates, tank quality, 1.50c.

Shapes, 1.50c.

Steel bars and bands, 1.50c., base; steel hoops, 1.70c. to 1.75c.

Iron bars, 1.559c. to 1.609c., Philadelphia; 1.35c., Chicago; 1.45c. to 1.50c., Pittsburgh.

Plain wire, 1.70c.; wire nails, $1.85 per keg, base; painted barb wire, 2.00c.; galvanized barb wire, 2.70c.; fabricated wire fence, 69½ per cent off list, in carload lots.

Sheets, blue annealed, 10-gage, 1.70c.; black, 28-gage, 2.10c. to 2.20c.; galvanized, 28-gage, 3.50c. to 3.60c.; painted corrugated, 28-gage, 2.30c.; galvanized corrugated, 28-gage, 3.55c. to 3.65c.

Tin plate, $3.10 to $3.20 for 100-lb. cokes.

Steel pipe, ¾ to 3-in., black, 79 per cent off list; galvanized, 63½ per cent off list.

Boiler tubes (less than carloads), 3½ to 4½-in., 71 per cent off list.

Structural rivets, 1.90c.; boiler rivets, 2.00c.

Notes on Chemistry and Metallurgy in Great Britain

(From our London Correspondent)

The Organization of Scientific and Industrial Research

We are a strange race. A national research scheme has been established. It was needed badly enough. But the net result is a ruling authority of successful politicians advised by ultra-scientific figure-heads.

There is first of all the establishment of a Committee of the Privy Council responsible for the expenditure of any new money provided by Parliament. This comprises the Lord President, the Chancellor of the Exchequer, the Secretary of State for Scotland, the President of the Board of Education, the Chief Secretary for Ireland, "together with such other Ministers and individual members of the Privy Council as it may be thought desirable to add." Under this category Lord Haldane, Mr. Arthur Acland, and Mr. J. A. Pease have been added to the Committee.

The second link in the chain is the advisory council which has to advise the Committee on:

(1) Proposals for instituting scientific research.

(2) Proposals for establishing or developing special institutions or departments of existing institutions for the scientific study of problems affecting particular industries and trades.

(3) The establishment and award of Research Studentships and Fellowships.

The first members of the advisory council are Lord Rayleigh, Dr. G. T. Beilby, Mr. W. Duddell, Prof. B. Hopkinson, Professor McLelland, Professor Meldola, Professor Threlfall, and Sir William M'Cormick. Of course Mr. Duddell, and to a certain extent Mr. Beilby, are open to suspicion as having some practical experience of applied science, but so far as the advisory council is concerned there is no direct representative of manufacturing interests. As for the Committee of the Privy Council and hope of representation of manufacturing interests by men who know depends on the fortuitous chances and mischances of who may be the members of H. M. Government at any given moment. There is in fact no prospect that the men who know will under the present scheme ever sit on the ultimate court of administration.

Yet despite these defects which your correspondent voices and which are very widely recognized, the scheme is by no means doomed. Salvation will be with the practical scientists on the Institutional Research Committees and in the sub-committees they appoint to deal with specific subjects. In spite of all the very learned or politically very successful figure-heads, in spite of all this top hamper one can still hope for good results. It is another question whether the over-all efficiency will not be capable of great improvement. In England figure-heads are necessary, and one supposes that it is only as a sop to the modern democratic unrest that they are not at once more numerous and more picturesque, and more uselessly arundite. According to all precedent there should at least have been added a spiritual peer, an eminent Assyriologist, a titled philatelist, the Astronomer Royal, and the President of the divorce court.

The Lighting of Factories and Workshops

The first report of the Home Office Departmental Committee on lighting in factories and workshops has just been issued, the Committee feeling that although the investigation is incomplete, and cannot be completed under the conditions prevailing at present, it is desirable to make available to the public the work already done, and to formulate certain recommendations regarding suitable standards of illumination. The report contains an immense amount of detailed information, and the subject is discussed at considerable length. The conclusions of the Committee in brief are that statutory standards of "adequate and suitable illumination" should be set up, and the standards suggested are minimum illumination on a horizontal plane at the floor level of 0.25 foot-candle in workrooms, 0.4 foot-candle in foundries, 0.1 foot-candle in passages, and 0.05 foot-candle in open spaces out of doors. These recommendations are subject to certain qualifications and exemptions, and are, of course, only provisional; they will serve, however, to indicate approximately the standards that will eventually be adopted, and will thus be of assistance to works managers, who will also find the mass of data contained in the voluminous appendices of the greatest value.

Market Prices

AUGUST, 1915.

Copper opened (3d) £72.10 and was £74 on the 4th, then fell away to £66.17.6 on the 13th. It subsequently improved a little to £67.17.6 on the 16th, but afterward continued to fall to £64.7.6 on the 23d. On the 25th a sharp rise of £3 occurred, and on the 26th £72.15 was reached, and £72.17.6 on the 27th. It closes lower at £68.17.6.

Tin opened £156.15 and dropped away to £150 by the 9th, and, after touching £152.6 on the 11th, to £149.10 on the 13th. It then hardened slightly but was again falling on the 18th and reached £148.5 on the 20th. On the 24th it was £150.5. This metal also participated in the rise on the 25th, and was £153 on the 27th, closing at £151.5.

Cleveland opened 65/10½ and touched 66/3 on the 5th and 66/4½ on the 9th and 11th, but afterward went lower, declining to 64/1½ by the 20th. On the 23d it was 64/7 and closed 65/6.

Hematite remained at 95/- throughout the month.

Scotch Pig opened 71/10½ and was 72/4½ by the 9th and on the 11th, but 71/10½ on the 13th and 70/31½ on the 20th. On the 24th it had recovered to 71/1½ but closed 70/9.

English Lead opened £24.15 and fell steadily to £21.10 on the 12th, recovering then to £22 and on the 24th to £22.10, closing same price.

this price at once becoming the minimum of the market. The company's previous advance was dated only ten days earlier, while the preceding advance had been about a fortnight earlier, making a total advance in these products of $3 a ton in less than thirty days. With their related products of skelp, hoops, bands, etc., these products comprise fully one-half the total rolled-steel product of the industry, excluding standard rails, which may properly be excluded in such a comparison as they have not changed definitely in price in more than fourteen years.

The average price of all finished steel products is now equal to the average in the winter of 1912-13, when the great advance of 1912 had culminated and the market was preparing for a period of decline. Prices are still about $2 a ton below the highest level reached in the 1909 rise, and about $6 a ton below the level of 1907. It would be quite unsafe to venture a prediction that the records of 1909 and 1907 would not be broken even in a very few months, so strong is the present price advancing tendency.

The physical influences in the steel market are very strong. Mills have been falling farther and farther behind in deliveries, although in the past three months they have not only produced steel at a much greater rate than ever before, but have doubtless attained the maximum output of which they are capable. Consumptive demand by domestic industries generally is increasing, while the railroads are facing a car shortage not merely during the crop-moving season but thereafter, while their net earnings are at a new high record. The demand from certain belligerent countries is extremely heavy, with no signs of abatement, and the demand from neutral countries is constantly increasing.

The mental influences in the steel market are equally strong, in the matter of tending to advance prices. Buyers of steel are familiar with the fact that war tends to raise prices and recognize that the demand for steel is unprecedented, so that they are much less disposed to resist advances than is usually the case. Sellers are distinctly governed by a different policy than formerly. The theory that steady prices for steel mean steady demand has not worked out satisfactorily. Having passed through a long and severe depression, steel producers are committed to a policy of securing returns when returns can be secured, and the demand with which they are confronted is in the main not such as would be curtailed by price advances to the extent that might be expected under normal conditions. It is a patent fact that conditions in the world are very far from normal.

Thus both physical and mental influences combine to give a strongly advancing trend to steel prices. The end is by no means in sight, and it is easy to imagine prices advancing much more in the next ten months, possibly in the next six months, than they have advanced in the past ten.

Connellsville Coke

An outstanding feature of the general course of prices in the iron and steel industry during the first nine months of the year was that Connellsville coke failed to score any material advance, whereas in previous price movement in the industry coke advanced much more in percentage than did pig iron or steel. The reason was that the rapid erection of by-product coke ovens in recent years produced a total coke-making capacity much in excess of the possible requirements of blast furnaces. Late in September, however, the strength in the general situation became so great that furnaces began to inquire for coke for 1916 delivery, against the expiration of contracts at the close of this year, and in succeeding weeks, up to the middle of October, the major portion of the contract business was done at prices averaging about $2.25 per net ton at ovens, an advance of perhaps 50 cents a ton over contract prices for the present half-year. Furnace coke for prompt shipment remained at a relatively low price. The middle of October found prompt furnace coke at $1.75 to $1.85, and then prices jumped suddenly until within a few days as high as $2.75 was paid for coke for spot shipment. The production of the Connellsville region expanded until a point was reached at which labor scarcity intervened. It remains a question whether the scarcity of coke for prompt shipment will be relieved, or the contract price for next year will advance to the level of the prompt market.

Pig Iron

After the fairly sharp advances that characterized the pig-iron market in July, August and September, a distinct lull occurred in buying, and prices were stationary for practically the first three weeks in October, when a fresh advancing movement began, based not so much upon an increase in buying as upon sentiment, as steel prices were rising rapidly and a broader market for pig iron seemed in prospect. In the past fortnight Southern iron has advanced 50 cents a ton, while the Chicago furnaces marked up prices by no less than $1.50 and foundry iron in the valleys advanced 50 cents, to a level with the previously established market for basic iron, a level to which it was entitled by reference to cost of production. The steel mills do not buy merchant pig iron to the extent usually expected when they are crowding for production, but predictions are made that consumption by iron foundries is destined to increase materially. The market is quotable as follows: No. 2 foundry, delivered Philadelphia, $16.25 to $16.75; f.o.b. furnace, Buffalo, $15.50 to $16; delivered Cleveland, $15.25; f.o.b. furnace, Chicago, $15.50 to $16; f.o.b. Birmingham, $12 for prompt and $13 for first half delivery; at valley furnaces, 95 cents higher delivered Pittsburgh: Bessemer, $16; basic, malleable and foundry, $15; gray forge, $14.50.

The Jones & Laughlin Steel Company has leased Rebecca, a merchant stack at Kittanning, Pa., and will manufacture its ferromanganese at that furnace, thus releasing one of the stacks at its Aliquippa works for the production of standard basic. Rebecca was idle, but plans had been completed by the owners for blowing it in on basic iron for the market.

Steel

Soft steel billets have not been really a market commodity of late. The mills were oversold for early deliveries and did not care to make commitments for late delivery. Nominally the market has been called $25 for Bessemer and $26 for open-hearth billets, with $1 extra for sheet bars, but practically there have been no sellers. Transactions for 1916 delivery are just beginning. A sale of 4500 tons of open-hearth sheet bars for delivery January to June has been made at slightly over $30 delivered, equivalent to about $28 at maker's mill, Pittsburgh, and Bessemer sheet bars are reported to have been sold for first quarters at about $27, Pittsburgh. Makers of large rounds for shells, possibly caught short, have paid all the way from $50 to $70 for billets made to shell steel specifications, discards 25 or 30 per cent, ingots chipped, and analysis fairly stringent though by no means difficult. Rods are $32 to $33, Pittsburgh.

Finished Steel

Effective Oct. 21 wire products were advanced $2 a ton. Bars, plates and shapes advanced $1 a ton about Oct. 25. Black and blue annealed sheets have advanced rather steadily. Tubular goods are unchanged.

November 24th, 1915

Professor J. C. McLennan,
University of Toronto.

Dear Professor McLennan:

I have sent to Victoria College your letter with regard to Mr. A. W. Horner, asking them to deal with the matter.

Yours sincerely,

President.

Dec 1st 1915

46. Churchill ave
Toronto

Prof. J. C. McLennan

Sir:

I herewith tender my resignation giving one month notice hoping not to cause no inconvenience and that my services discontinue by the 1st of the new year

I am Yours,
Faithfully J. H. Meyer

COPY.

February 23rd, 1916

Professor J. C. McLennan,
Department of Physics,
University of Toronto.

My dear Professor McLennan:

I have a letter this morning from Professor T. L. Walker in which he states that at the meeting of the Board of Graduate Studies held on Monday you told the Board that there had been complaints of neglect of Dr. Walker in his departmental work. Naturally Dr. Walker is much incensed at this statement and has reported it to me and asked me to make inquiry as to what evidence there is for such a remark . It is of course a serious charge and I feel that in justice to Professor Walker you should give me the grounds on which you base your charge. I may say that no reports of his neglect have ever been made to me.

Yours sincerely,

(Sgd.) R. A. Falconer

President.

COPY.

Feb 24, 1916.

President Falconer,
University of Toronto.

My dear President Falconer,

I am sorry to hear that Professor T. L. Walker is annoyed about a remark which I made at the Board of Graduate Studies on Monday last. He brought it on himself, however, and perhaps I may take the liberty of suggesting that since he has chosen to bring the matter to your attention, he might also have related to you all the circumstances connected with the incident.

They are as follows:-

In the course of a debate the suggestion was made that the Board of Graduate Studies might undertake to receive applications from candidates for admission at any time during the year,-during the summer , for example. Professor Walker immediately proffered the remark that such a policy would be inoperable on account of members of the staff being away from the University in the summer, and he cited the Department of Physics as illustrating the bearing of his remarks. Now I venture to think there was no need to particularize in this matter, as it was the second time in debate recently when a reference of this character was made to my going to Europe in the summer. I thought as I had not said anything on the previous occasion that it was time to indicate that such references had better stop. I therefore said, that on going to Europe in the summer I always made such arrangements as were satisfactory to you for having all questions which might come up in connection with my Department settled promptly and fully by a member of my staff on the spot acting for me. I said further that "I had never heard of any complaint in regard to my department in this connection, and that the only complaint I had ever heard of had been in connection with the department of which my colleague (Professor Walker) was the distinguished head."

That was the incident, and Professor Walker said nothing further. Had he asked what was in my mind I should have told him that it was a case which he on several occasions some time ago brought forward of a student writing in the summer for information connected with the Department of Mineralogy and not getting an answer to his questions. Professor Walker, in referring to this case took the ground I understood, that the old Board of Postgraduate Studies did not look after its duties in the summer as it should, and I am under the impression that when this matter was disposed of it was not clear whether someone in the Registrar's Office had failed to give the information asked for through inadvertence, or through the impossibility of getting the information asked for in the summer from the Department of Mineralogy.

Professor Macallum will, no doubt, be able to recall the details of the case. I am sorry that you have been troubled with this matter for I should have thought that the rules of debate which obtain in the Board of Postgraduate Studies would have been found sufficiently broad to have allowed the matter to be disposed of there.

I have the honour to be, Yours faithfully,

(Sgd.)J. C. McLennan

DEPARTMENT OF PHYSICS

Toronto, June 14, 1916.

President Falconer,
University of Toronto

Dear President Falconer,

Dr. Gilchrist informs me that he has put in an application to be permitted to enlist for overseas work in connection with one of the hospitals on the other side. If leave of absence be granted him for this purpose it will necessitate my making new arrangements for taking his work for next session. I have thought out a plan to do this, and I should be very glad if you would kindly let me know immediately that leave of absence is granted, so that I may make a recommendation.

I do not know what action you and the Board may take in regard to his salary during absence, but I should like to point out that with Mr. McTaggart away and Blackman away, the staff is carrying about all the load that it can, and care should be taken to see that the appropriation left available is sufficient to meet the requirements of the Department.

I have the honour to be,
Yours faithfully,

J. C. McLennan